

WHAT IS CLAIMED IS:

1. A variable nozzle control apparatus adapted for a turbocharger in an engine comprising:

a variable nozzle having a vane;

5 an engine ECU for identifying an operating situation of the engine by detected outputs of sensors in the engine and outputting a control signal; and

an electronic control actuator for controlling an opening of the vane in response to the control signal
10 transmitted from the engine ECU,

wherein the electronic control actuator includes an electronic control circuit section for receiving an opening indication information of the vane from the engine ECU and outputting an output signal;

15 a driving section for receiving the output signal from the electronic control circuit and driving the vane of the variable nozzle through an output shaft; and

an angle sensor for detecting a rotation angle of the output shaft to output an actual angle signal of the
20 output shaft to the electronic control circuit.

2. A variable nozzle control apparatus according to claim 1, wherein the electronic control circuit section includes an angle signal converting device for converting
25 the opening indication information of the vane into a

target angle signal of the output shaft,

a comparing device for comparing the target angle signal from the angle signal converting device with the actual angle signal from the angle sensor, and outputting
5 an indication signal corresponding to a difference between the target signal and the actual signal,

a calculating device for carrying out a calculation processing over the indication signal transmitted from the comparing device, and

10 a motor driving logic generating device for inputting the output signal to a motor driver of the driving section.

3. A variable nozzle control apparatus according to
15 claim 2, wherein the driving section includes the motor driver for receiving the output signal the electronic control circuit and outputting a driving signal, a motor section driven by the driving signal and coupled to the output shaft through a reduction gear mechanism, and the
20 output shaft driving the vane of the variable nozzle.

4. A variable nozzle control apparatus according to claim 2, wherein the electronic control circuit further includes:

25 a wiping command device for outputting a command

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signal to execute a wiping operation for causing the vane to be stopped in a full open position via a full closing position at least once in a full operating region of the vane of the variable nozzle by a status indication
5 information transmitted from the engine ECU based on a stop of the engine by an OFF operation of an ignition switch, and a wiping processing device for introducing the command signal of the wiping command device into the motor driving logic generating device.

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